



Service Manual

420D BACKHOE LOADER

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Product: BACKHOE LOADER

Model: 420D BACKHOE LOADER BLN

Configuration: 420D Backhoe Loader BLN00001-04543 (MACHINE) POWERED BY 3054 Engine

Disassembly and Assembly

416D, 420D, 424D, 428D, 430D, 432D, 438D and 442D Backhoe Loaders Engine

Supplement

Media Number -REN3573-02

Publication Date -01/09/2009

Date Updated -30/09/2009

i01390521

Air Cleaner - Remove and Install

SMCS - 1051-010

Removal Procedure

Start By:

- A. Release the pressure in the hydraulic system. Refer to Disassembly and Assembly, "Hydraulic System Pressure - Release".

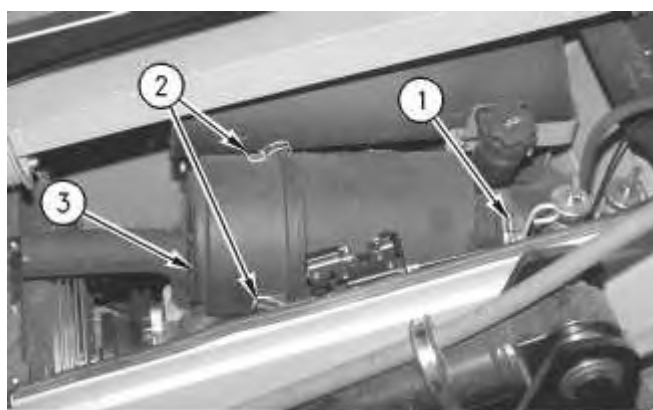


Illustration 1

g00530249

1. Loosen hose clamp (1). Unhook three clips (2) and remove the air cleaner cover (3) .

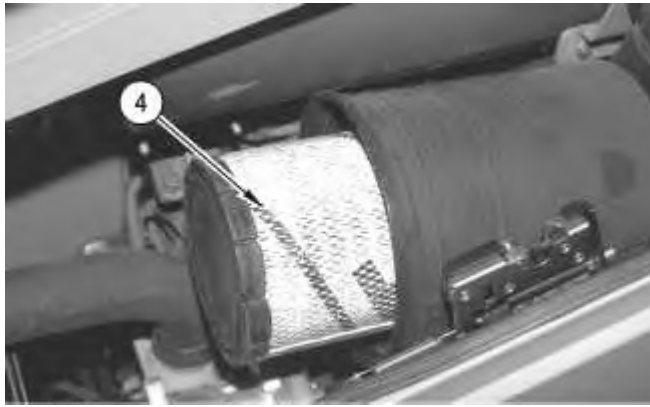


Illustration 2

g00530250

2. Remove the air filter cartridge (4) .



Illustration 3

g00530251

3. Remove air filter cartridge (5), four bolts (6) and air filter housing (7) .

Installation Procedure



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1. Install the filter housing (7). Install four bolts (6) and install the air filter cartridge (5) .

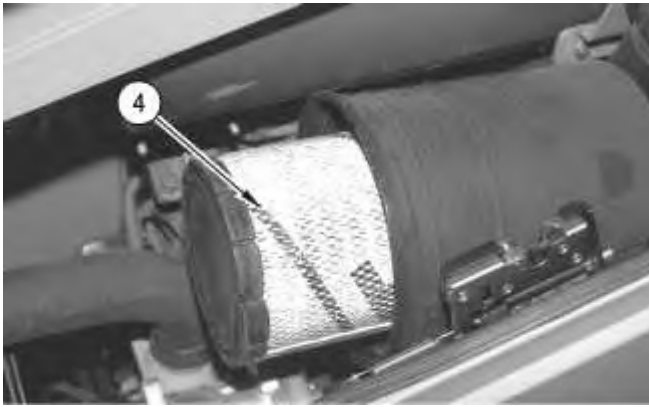


Illustration 5

2. Install the air filter cartridge (4) .

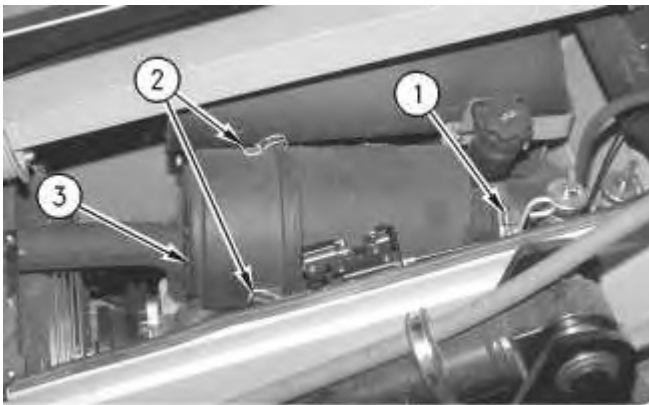


Illustration 6

3. Replace air cleaner cover (3) and secure cover (3) with three clips (2). Tighten the hose clamp (1) .

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Publication Date -01/09/2009

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i01389679

Alternator - Remove and Install

SMCS - 1405-010

Removal Procedure

Start By:

- A. Remove the left engine panel. Refer to Disassembly and Assembly, RENR3573, "Engine Cover - Remove and Install".

Note: Put identification on all wires for installation purposes.

1. Disconnect the batteries.

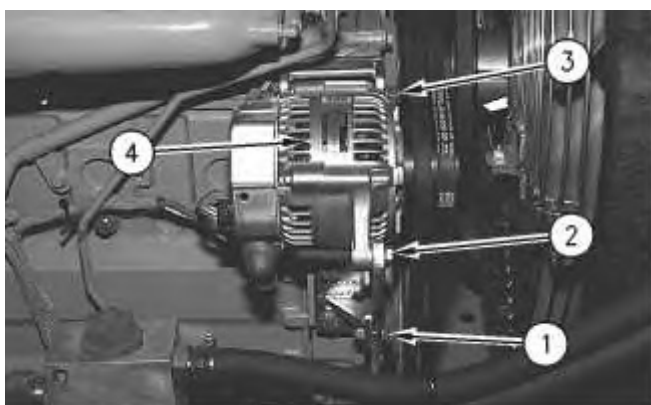


Illustration 1

g00518929

2. Loosen bolt (1), bolt (2), and bolt (3). Slide the alternator toward the engine and disconnect the alternator V-belts.

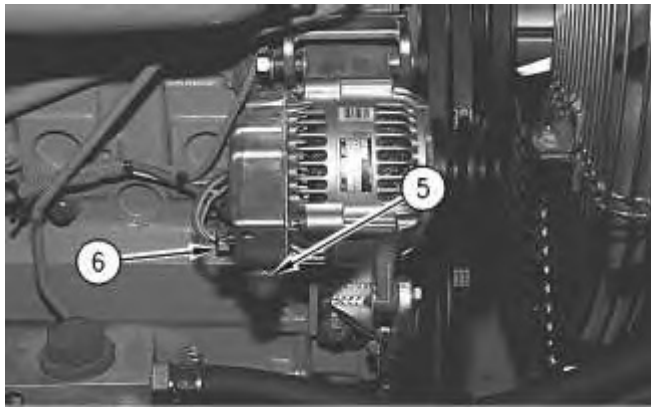


Illustration 2

g00518931

3. Disconnect electrical connection (5) and (6) .

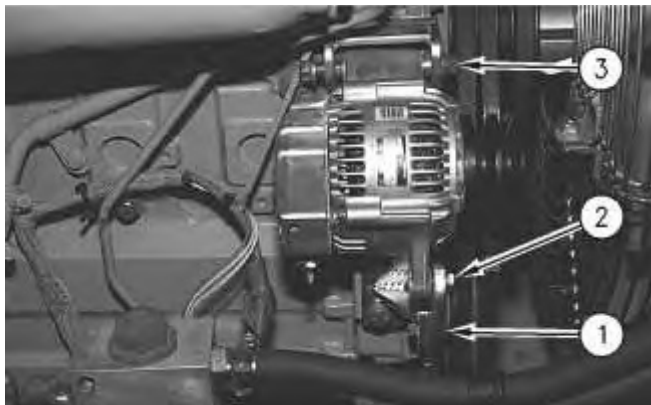


Illustration 3

g00518932

4. Remove bolt (1), bolt (2), and bolt (3). Remove the alternator.

Installation Procedure

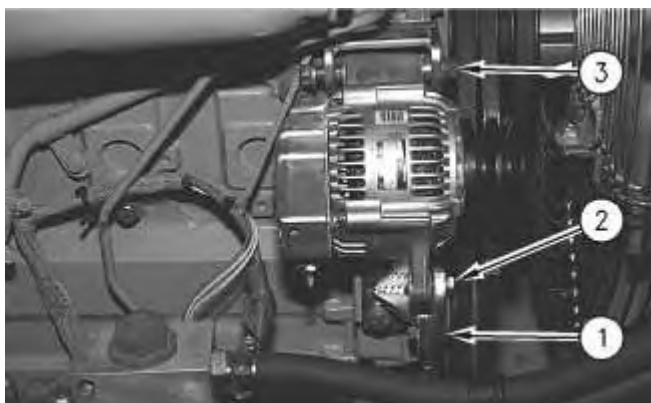


Illustration 4

g00518932

1. Slide the alternator toward the engine and connect the alternator V-belts. Install the alternator. Install bolt (1), bolt (2), and bolt (3).

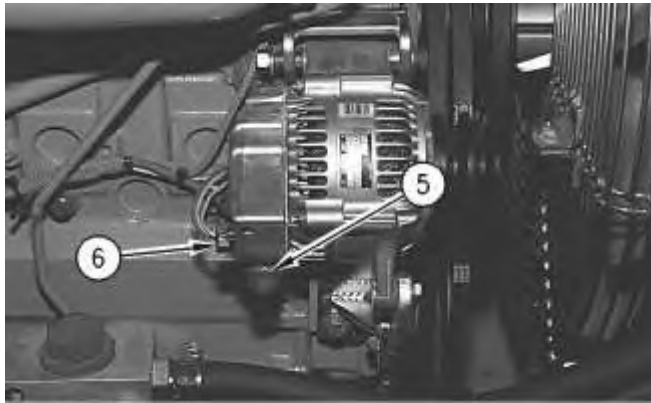


Illustration 5

g00518931

2. Connect electrical connection (5) and (6) .

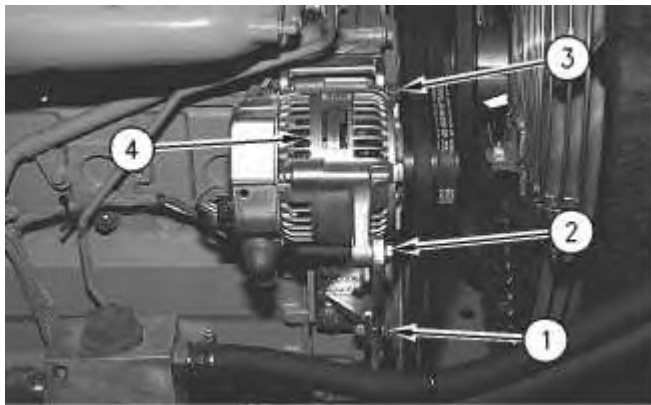


Illustration 6

g00518929

3. Tighten bolt (1), bolt (2), and bolt (3) .
4. Connect the batteries.

Note: For the proper tightening procedures of the V-belt, refer to the Operation and Maintenance Manual, SEBU7399, "V-Belts - Inspect/Adjust/Replace".,

End By: Install the right engine panel. Refer to Disassembly and AssemblyREN3573, "Engine Cover - Remove and Install".

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Disassembly and Assembly

416D, 420D, 424D, 428D, 430D, 432D, 438D and 442D Backhoe Loaders Engine

Supplement

Media Number -REN3573-02

Publication Date -01/09/2009

Date Updated -30/09/2009

i01389778

Crankshaft Pulley - Remove and Install

SMCS - 1205-010

Removal Procedure

Start By:

- A. Remove the right engine panel. Refer to Disassembly and Assembly, RENR3573, "Engine Cover - Remove and Install" for the correct procedure.
- B. Loosen the alternator. Refer to Disassembly and Assembly, RENR3573, "Alternator - Remove and Install" for the correct procedure.

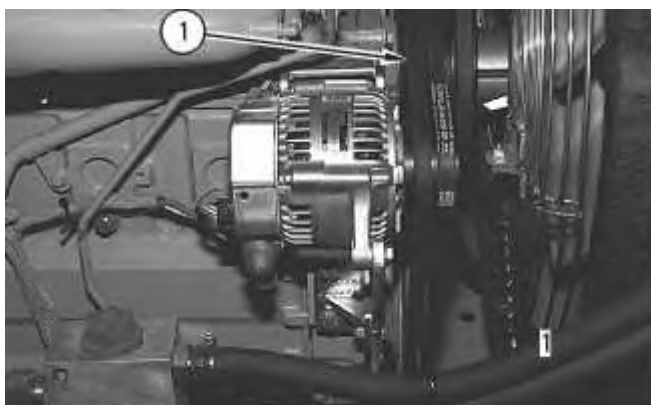


Illustration 1

g00732453

1. Remove the V-Belts (1) .

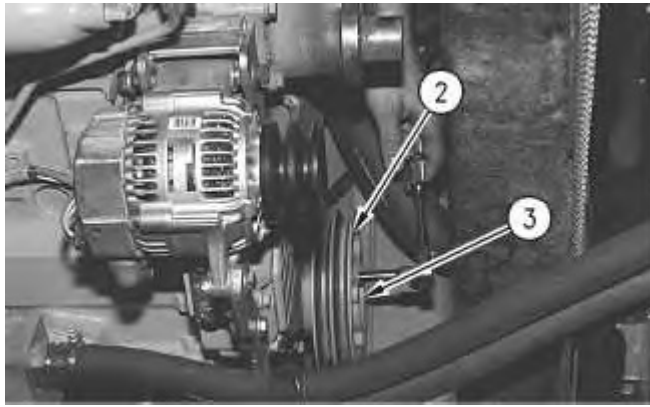


Illustration 2

g00732465

2. Remove three bolts (2) and remove crankshaft pulley (3) .

Installation Procedure

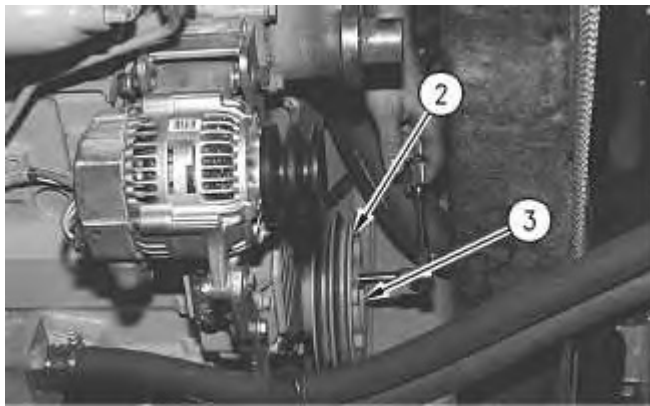
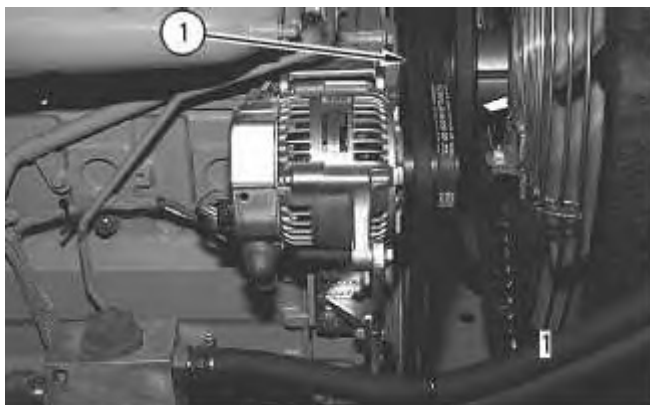


Illustration 3

g00732465

1. Install crankshaft pulley (2) and install three bolts (3). Evenly tighten the bolts to 115 N·m (85 lb ft).



2. Install V-Belts (1) .

Note: For the proper tightening procedure of the V-Belts, refer to Operation and Maintenance, SEBU7399, "V-Belts - Inspect/Adjust/Replace".

,

End By: Install the engine cover. Refer to Disassembly and AssemblyREN3573, "Engine Cover - Remove and Install" for the correct procedure.

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Publication Date -01/09/2009

Date Updated -30/09/2009

i01389659

Electric Starting Motor - Remove and Install

SMCS - 1453-010

Removal Procedure

Start By:

- A. Remove the right engine panel. Refer to Disassembly and Assembly, RENR3573, "Engine Cover - Remove and Install".

Note: Put identification tags on all wires for installation purposes.

1. Disconnect the batteries.

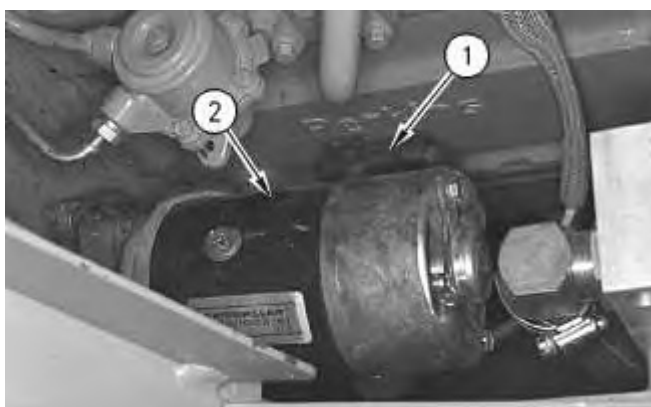


Illustration 1

g00518861

2. Remove wire (1) from starter (2) .

Note: The photograph for Step 3 was taken from the bottom of the starter.



Illustration 2

g00518862

3. Remove wire (3) and wire (4) from the starter.



Illustration 3

g00518863

4. Remove three bolts (5) and remove starter (2) .

Installation Procedure



Illustration 4

g00518863

1. Install the starter (2). Install three bolts (5) .

Note: The photograph for Step 2 was taken from the bottom of the starter.



Illustration 5

g00518862

2. Install wire (4) and wire (3) on the starter.

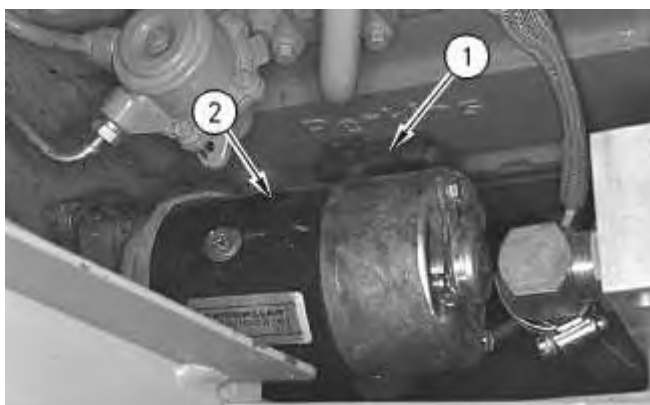


Illustration 6

g00518861

3. Install wire (1) on the starter (2) .

4. Connect the batteries.

,

End By: Install the right engine panel. Refer to Disassembly and AssemblyREN3573, "Engine Cover - Remove and Install".

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i01439767

Engine and Transmission - Install

SMCS - 1000-012; 1004-012; 3030-012; 3101-012

Installation Procedure

Table 1

Required Tools			
Tool	Part Number	Part Description	Qty
A	138-7573	Link Bracket	4
B	6V-3145	Load Leveler	1



Illustration 1

g00753080

1. Attach tool (B) to a suitable lifting device. Attach tool (B) to the engine and to the transmission.

2. Install the engine and the transmission. The weight of the engine and transmission is 680 kg (1500 lb).



Illustration 2

g00753725

3. Install two bolts (59). Tighten bolts (59) to 220 ± 30 N·m (160 ± 20 lb ft).

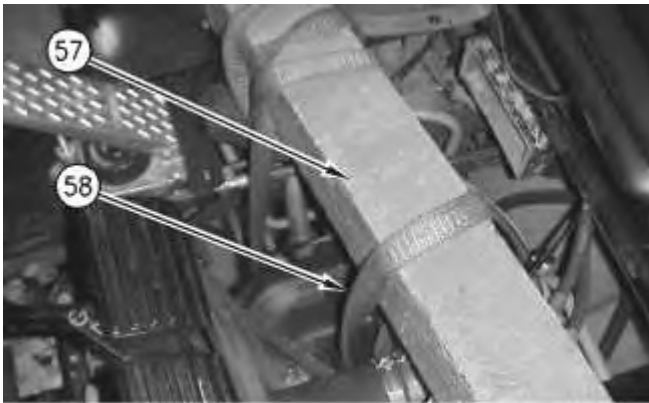


Illustration 3

g00753634

4. Remove straps (58) and wood block (57) .
-

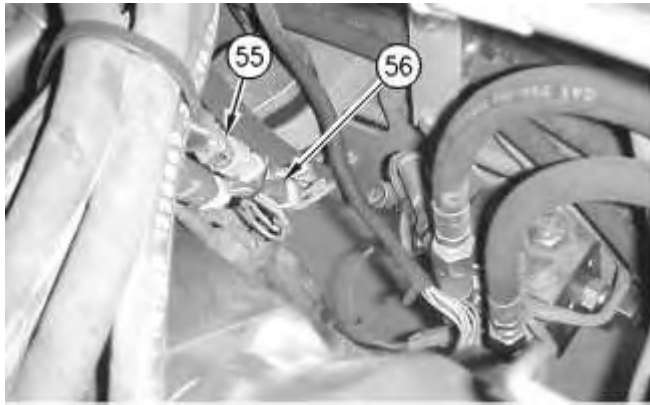


Illustration 4

g00753623

5. Connect three electrical connectors (56) and install strap (55) .



Illustration 5

g00753606

6. Connect seven electrical connectors (54) and install three straps (53).

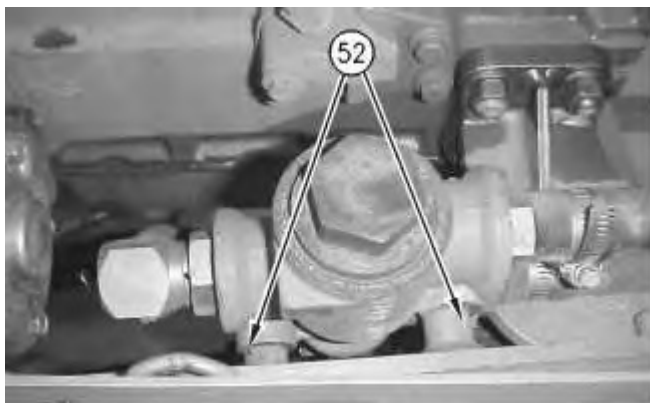


Illustration 6

g00753596

7. Install the valve and two bolts (52) .

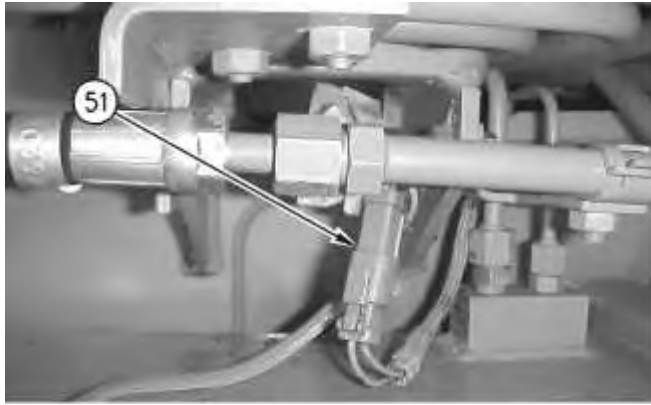


Illustration 7

g00753591

8. Connect electrical connector (51) .

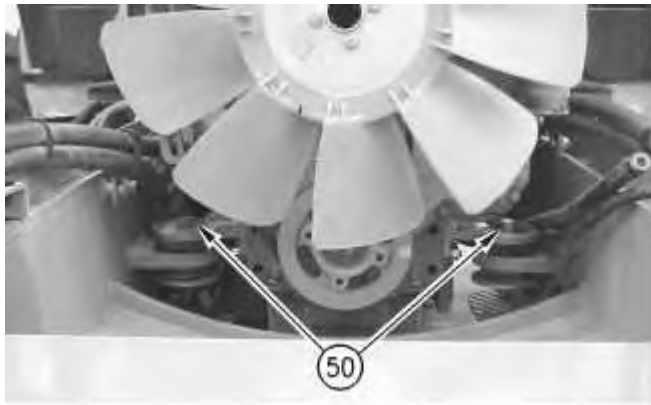


Illustration 8

g00753552

9. Install the washers and two engine mounting bolts (50). Tighten bolts (50) to $220 \pm 30 \text{ N}\cdot\text{m}$ ($160 \pm 20 \text{ lb}\cdot\text{ft}$).



10. Install the washers and engine mounting bolt (49). Tighten bolt (49) to $220 \pm 30 \text{ N}\cdot\text{m}$ ($160 \pm 20 \text{ lb ft}$).

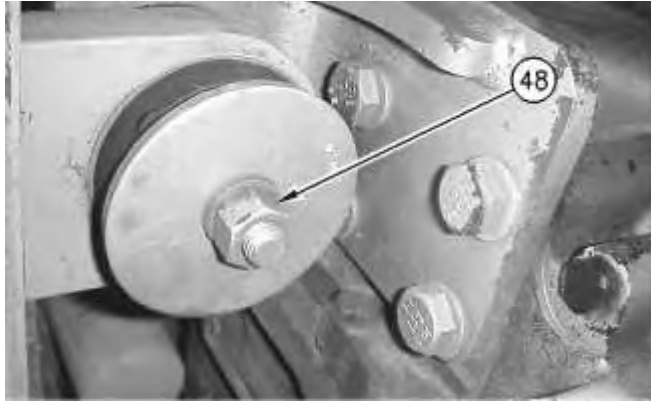


Illustration 10

g00753362

11. Install the washers and engine mounting bolt (48). Tighten bolt (48) to $220 \pm 30 \text{ N}\cdot\text{m}$ ($160 \pm 20 \text{ lb ft}$).

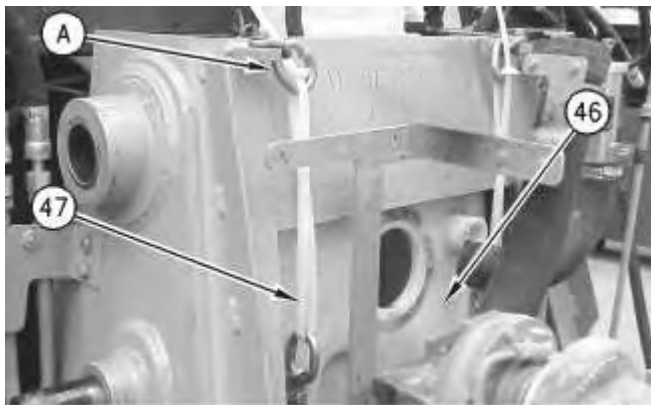


Illustration 11

g00753335

12. Remove tool (A) and two straps (47) from hydraulic tank (46) .
-

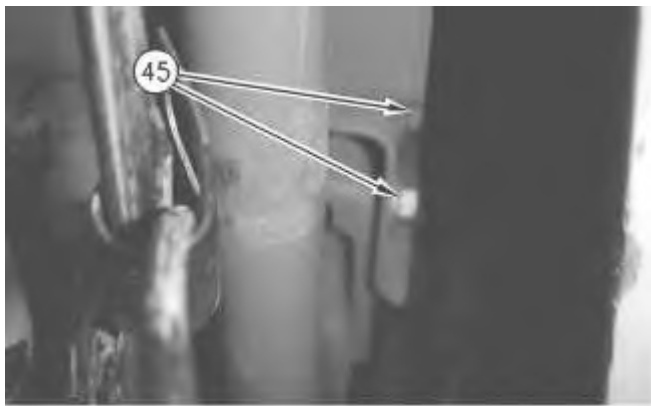


Illustration 12

g00753331

13. Install two bolts (45) .

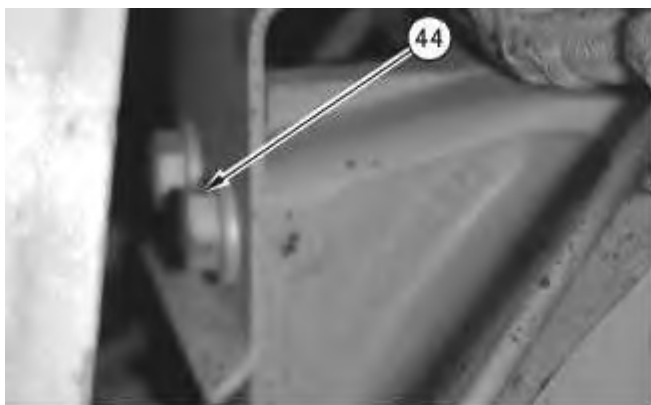


Illustration 13

g00753330

14. Install two bolts (44) .



Illustration 14

g00753329

15. Connect connector (43) .

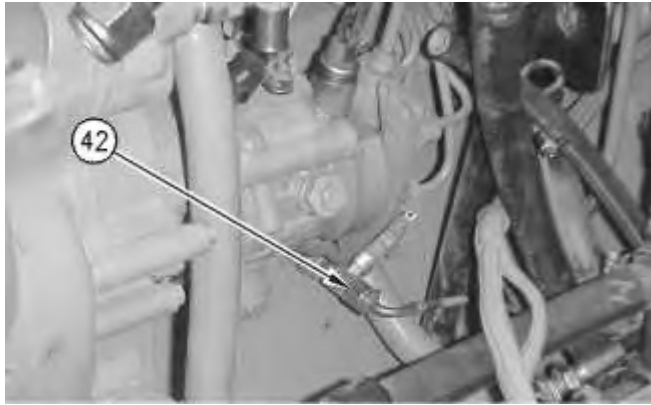


Illustration 15

g00753305

16. Connect test line (42) .

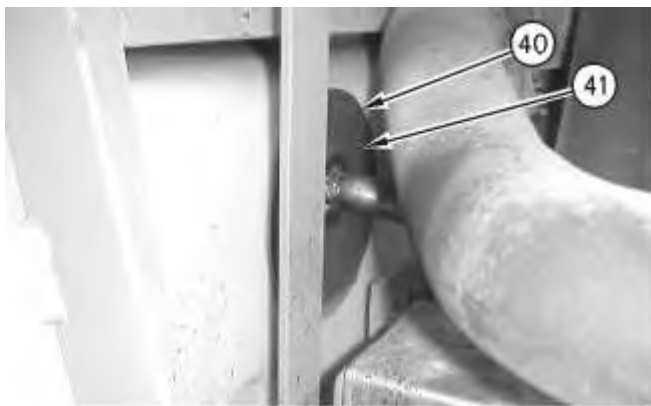
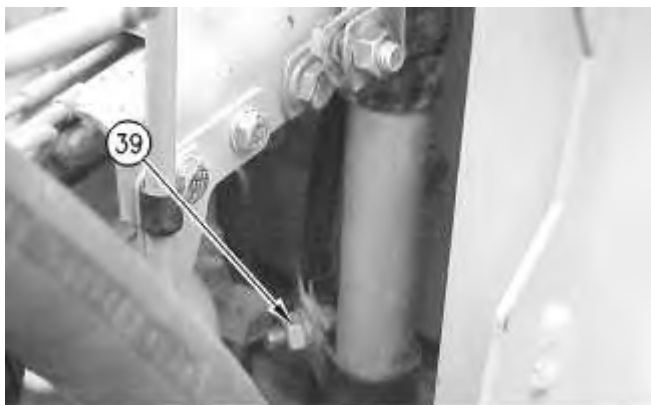


Illustration 16

g00753227

17. Install fitting (41) and six screws (40) .



18. Install the bolt and clamp (39) .

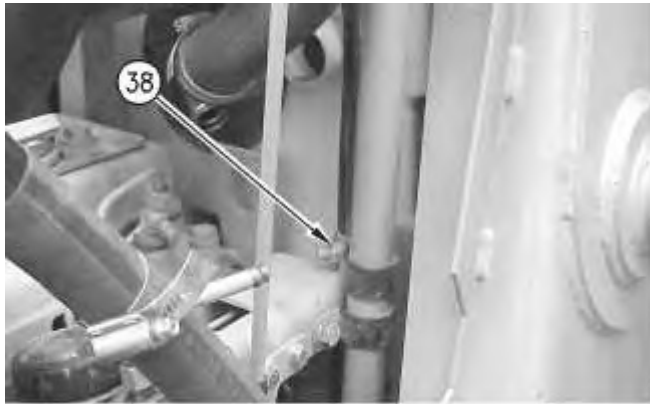


Illustration 18

19. Install the bolt and clamp (38) .

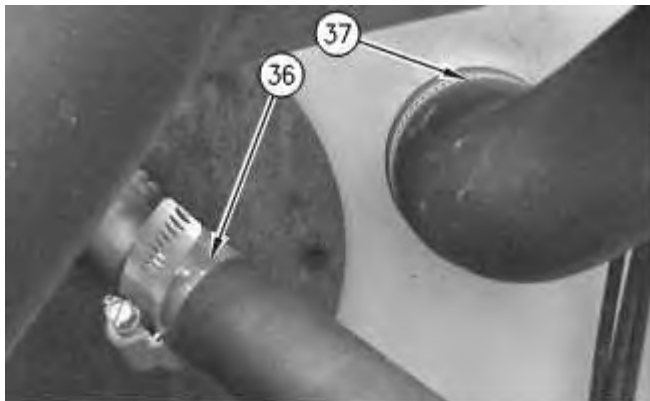


Illustration 19

20. Connect hoses (36) and (37) .



Illustration 20

g00753185

21. Install bolt (35) .

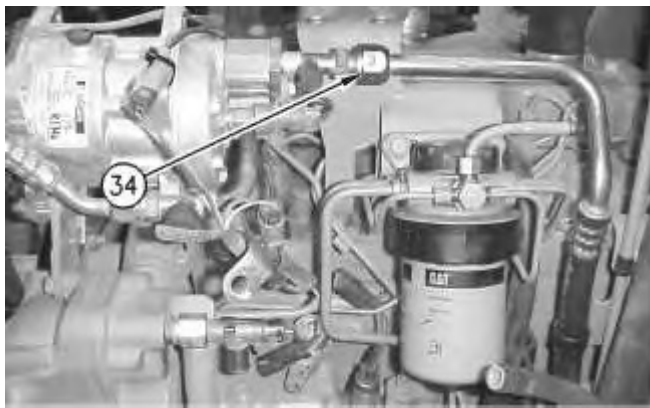


Illustration 21

g00752950

22. Connect line (34) .

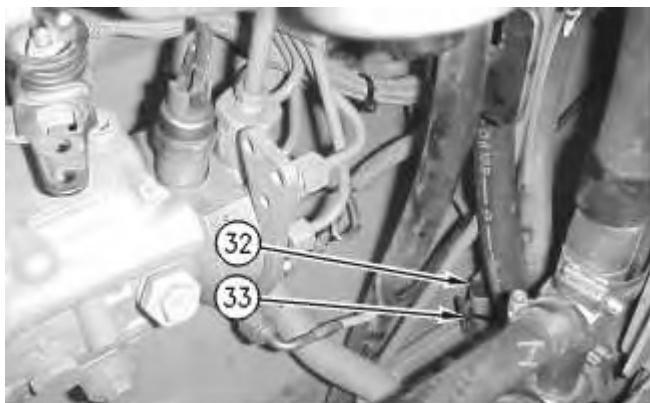


Illustration 22

g00752935

23. Connect connector (33) and install strap (32) .



Illustration 23

g00752929

24. Connect two wires (31) .

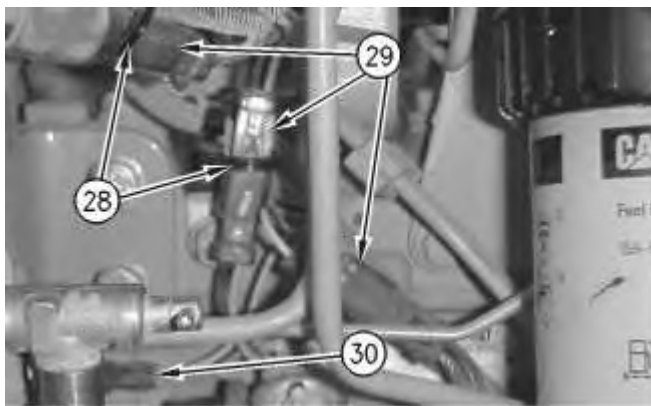
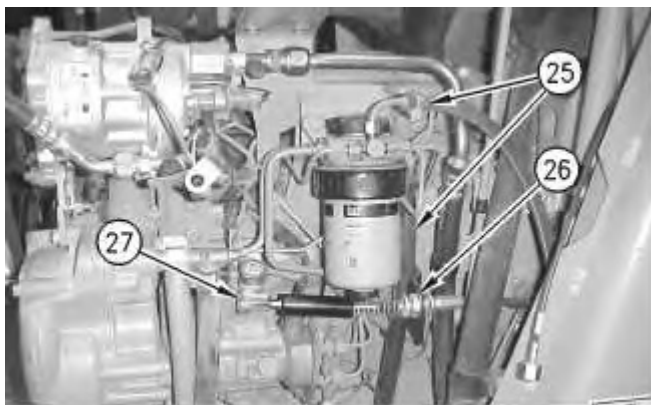


Illustration 24

g00752919

25. Connect two wires (30). Connect three connectors (29) and install two straps (28) .



26. Connect two lines (25) and governor cable (27). Tighten nut (26) to $38 \pm 2 \text{ N}\cdot\text{m}$ ($28 \pm 1.5 \text{ lb ft}$).



Illustration 26

g00752910

27. Install bolt (24) .



Illustration 27

g00752889

28. Connect two electrical connectors (23) .
-

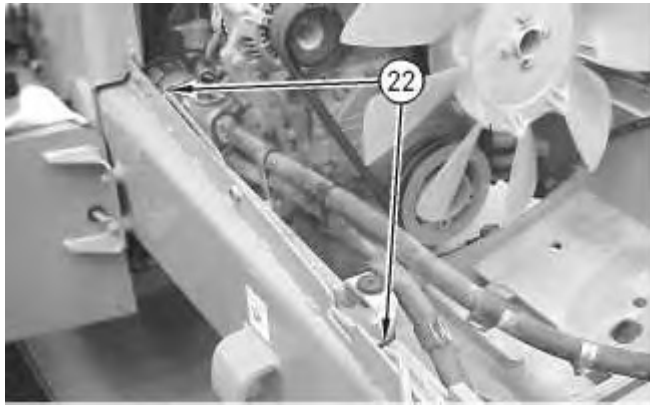


Illustration 28

g00752870

29. Install two straps (22) .

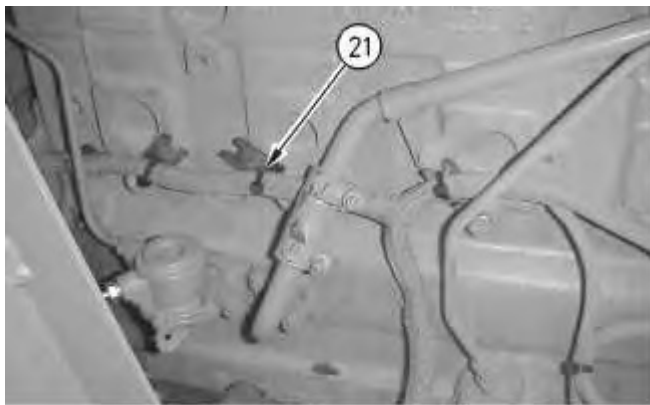


Illustration 29

g00752859

30. Install four straps (21) .

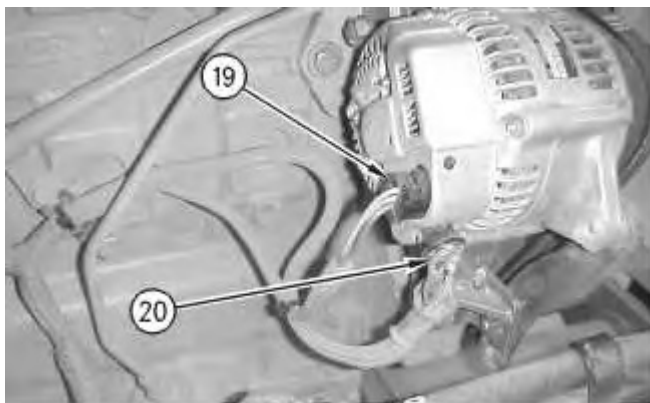


Illustration 30

g00752854

31. Connect connector (19) and wire (20) to the alternator.

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